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The Internet In China: Embarking on the "Information Superhighway" With One Hand on the Wheel and the Other Hand on the Plug

I. Introduction

As the twenty-first century approaches, global interest in the Internet has skyrocketed. Although the United States pioneered the exploration of the electronic frontier, the Internet is becoming increasingly popular in Europe and Asia.¹ Governments and private sector businesses in these countries are racing to develop telecommunication infrastructures which will make the Internet universally accessible and affordable.² As a result, the Internet is beginning to change the way people all over the world "work, live, learn, and communicate with one another."³

The efforts of various national governments to regulate the use and content of the Internet are accompanying efforts to provide Internet access.⁴ These regulatory efforts, motivated by cultural and political concerns, are often at odds with the nature and appeal of the technology and are likely to threaten the development of a true globally-networked, Internet community.⁵

The purpose of this Comment is to examine the legal implications of the Internet in China by providing analysis of the Chinese government's efforts to simultaneously promote and regulate the exchange of information over the Internet. Part II of this Comment will provide the following background information: (1) technical aspects of the Internet; (2) the efforts of various nations to regulate Internet usage; and, (3) China's traditional policies regarding the exchange of information. Part III will address the

1. Michael Neubarth, *The Internet: A Global Look*, INTERNET WORLD, Nov. 1995, at 95.

2. See *id.* at 95-112.

3. Zhang, M., *Information Highway Extends to China*, CINET-L NEWSL. (China News Digest), Mar. 17, 1994, No. 14, <<http://www.cnd.org/CNDservices.html>>.

4. Neubarth, *supra* note 1, at 95.

5. *Id.*

likely social and economic implications of China's emerging Internet through analysis of the Chinese government's attempts to promote the use of the Internet and still retain control of its content through regulation.

II. Background

The Internet, the latest development in communications technology, is rapidly gaining worldwide popularity. As an apparently borderless technology, it has given rise to tremendous information-sharing capabilities. Thus, several nations, including China, have been eager to embrace the Internet. Concurrently, the development of the Internet has given rise to controversies over the acceptable limitations on individual speech and expression.

China is a nation which has traditionally kept the dissemination of information and freedom of expression to a minimum.⁶ Therefore, a poignant tension has arisen: The Internet's seemingly limitless potential for global communication is pitted against the Chinese government's desire to control the flow of information in and out of the country.

A. What Is the Internet?

The Internet is the world's largest network⁷ of computer systems⁸—a global network which connects a myriad of computer networks to one another.⁹ Although labeled the "information superhighway,"¹⁰ the Internet is more accurately conceptualized

6. See generally SUZANNE OGDEN, CHINA'S UNRESOLVED ISSUES 150 (3d Ed. 1995); *Censorship, Chinese-style*, THE INDIANAPOLIS STAR, Dec. 9, 1996, at A18.

7. "Any time you connect 2 or more computers together so that they can share resources you have a computer network." *Glossary of Internet Terms*, INTERNET LITERACY CONSULTANTS, available in 12 MICROCOMPUTERS FOR INFO. MGMT. 133, 140 (1995) [hereinafter *Glossary*].

8. G. BURGESS ALLISON, THE LAWYER'S GUIDE TO THE INTERNET 19 (1995).

9. *Id.* "[The Internet] links together the massive on-line service bureaus, such as Compuserve, Prodigy, and America On-line. It links together hundreds of thousands of universities, government agencies, and corporations located in almost a hundred countries around the world." *Id.*

10. The phrase, "information superhighway," is commonly used to describe various aspects of electronic information technology (including the Internet), especially in the popular media. This phrase, however, has been criticized by computer experts as an over-used, misleading analogy. See ALLISON, *supra* note 8, at 45.

as a web¹¹ which links hundreds of thousands of computers, with no centralized control center.¹² This non-linear, web model originated in 1969, when the United States Department of Defense introduced ARPAnet, the forerunner of today's Internet.¹³ ARPAnet was an experiment designed to test the ability to maintain links between computers in a way that would not be hindered by partial outages.¹⁴ Therefore, the Internet has no central point and cannot be blocked by a mere break in the chain.¹⁵

A corollary to the Internet's non-linear, decentralized model of connectivity is the absence of any central authority or owner.¹⁶ The Internet is paid for by each organization that establishes a full-time link,¹⁷ via a dedicated line.¹⁸ These organizations pay for the link and their own equipment.¹⁹

1. *The Development of "Cyberian" culture.*—Because no one entity owns the Internet and no one entity governs the Internet, there are no official "rules" and no official guidelines.²⁰ The Internet is not, however, completely without structure.²¹ Rather,

11. This does not refer to the "World Wide Web" (WWW). WWW is a term used to describe the Internet's universe of hypertext server-computers (HTTP servers), which allow text, graphics, and sound files to be mixed together and accessed by Internet users. See *Glossary*, *supra* note 7, at 144.

12. ALLISON, *supra* note 8, at 31.

13. *Id.*

14. *Id.* The Department of Defense designed a network protocol which assumed that any computer or group of computers within the network may be unavailable for long periods of time. The technology which resulted is a protocol that will continually attempt to send information from a source computer to a destination computer by whatever route allows the information to reach its destination. *Id.*

15. *Id.*

16. See *id.* at 29-43. In order to understand the concept that no one owns the Internet, it is helpful to consider its similarity to faxing. "No one is 'in charge' of faxing. No one 'owns' it. . . . You need to own your own equipment, and you pay for whatever telephone bills you run up." *Id.* at 30.

17. A "link" is an Internet connection. Each link consists of a "host"—"[a] computer, or software package, that provides a specific kind of service to client software running on other computers." *Glossary*, *supra* note 7, at 142. The Internet is most commonly accessed, with the use of client software, by contacting a server at one of the established Internet links. See generally *id.* at 133-44.

18. ALLISON, *supra* note 8, at 32.

19. *Id.* This can be analogized to faxing. *Id.* at 30.

20. *Id.* at 35.

21. *Id.*

a community ethic is the foundation for the operation of the Internet, and it is essentially "run" by volunteers.²²

Rather than complete anarchy, the Internet operates under certain unofficial codes of conduct.²³ The users, or inhabitants, of the Internet embrace the absence of authority by adhering to established standards and practices for working on the Internet.²⁴ There are basically two guiding principles of netiquette:²⁵ freedom of speech²⁶ and self-determination.²⁷

2. *The Potential Economic Effects of Doing Business on the Global Internet.*—A global electronic marketplace began to truly take shape in 1995-1996, and will likely become "an [increasingly] important factor in corporate strategy" as the twenty-first century approaches.²⁸ Each month thousands of companies go on-line to communicate with customers abroad and sell their products internationally.²⁹ The emergence of the Internet as a business tool has begun to change the ground rules for world commerce.³⁰

The Internet offers virtually any company the opportunity to compete globally, regardless of its size, location, or product.³¹ Thus, "the traditional approaches to marketing, sales, and customer relationships no longer apply."³² Rather, by integrating the utilization of the Internet into day to day business operations, companies may become members of "cybernational" business communities.³³

In addition to the new markets which the Internet makes accessible to businesses worldwide, the Internet also provides the

22. *Id.* The community spirit apparently stems from the desire to keep the Internet void of central authority. *Id.*

23. See ALLISON, *supra* note 8, at 38-40.

24. *Id.* at 29. The commonly accepted standards and practices used on the Internet are frequently referred to as "netiquette." *Id.*

25. *Id.* at 37.

26. See *id.* at 37-39.

27. See *id.* at 39-42.

28. MARY J. CRONIN, *GLOBAL ADVANTAGE ON THE INTERNET ix* (1996).

29. *Id.* at 1.

30. *Id.*

31. *Id.* at 2. Smaller companies, by using the Internet to establish a global presence, are venturing into territories formerly inhabited solely by large multinational corporations. *Id.* at 3.

32. *Id.* at 2.

33. See CRONIN, *supra* note 28, at 3, 4. Within these cybernational communities, businesses can provide "a fully integrated platform for all aspects of electronic commerce: product information, marketing, ordering, sales, payment, as well as product and customer support." *Id.* at 5-6.

opportunity for a cost effective means of both communication and information management.³⁴ A flat monthly fee for an Internet connection will often be substantially less expensive than paying for phone calls, faxes and express deliveries.³⁵ Thus, Internet applications can have the simultaneous effect of reducing costs and boosting revenues.³⁶

3. *A Survey of Several Governments' Efforts to Regulate the Internet.*³⁷—The global explosion of Internet use has led many governments to the realization that virtually anything can be sent over the Internet. On the one hand, such seemingly limitless potential has been viewed as a possible economic boon, and governments are striving to embrace (and even promote) the use of the Internet.³⁸ On the other hand, however, many governments fear the Internet's limitless potential—particularly the potential for transmission of pornographic and anti-government content.³⁹ This fear has inspired governmental attempts to regulate the Internet, principally to prohibit users from sending or receiving "information" which is considered offensive.⁴⁰ "Offensiveness" is a subjective, cultural determination defined differently in each country depending on the level of free speech protection afforded by a particular country. The following sub-sections illustrate the international spectrum of Internet regulation, which may be used as points of comparison to China's regulatory efforts.

a. *The United States.*—The freedoms of speech and expression have traditionally been protected under the United

34. *Id.* at 6.

35. *Id.* at 7. Additionally, this cost benefit will increase with the number of employees, as there is generally no per-use charge for Internet activity. *Id.*

36. *Id.* at 6-7.

37. For a comprehensive, global survey of attempts to regulate the Internet, see Amy Knoll, Comment, *Any Which Way But Loose: Nations Regulate the Internet*, 4 TUL. J. INT'L & COMP. L. 275 (1996).

38. Neubarth, *supra* note 1, at 96.

39. Pornography is almost universally criticized; the governments of nearly every nation which has access to the Internet have pronounced certain limitations on the transmission of pornographic material over the Internet. Anti-government and political content has been limited or outlawed mainly in nations which traditionally have either not recognized, or given little protection to, freedom of speech. See, e.g., Wayne Arnold, *Cyberpatrols: Censoring the Net Isn't Easy, But It Can Be Intimidating*, ASIAN WALL ST. J., Sept. 11, 1996, at 1.

40. Arnold, *supra* note 39, at 1; see also Christina Barron, *Internet: rights and wrongs*, DOW JONES EUR. REP., Feb. 1, 1997, at 10.

States Constitution.⁴¹ The level of protection to which speech is entitled under the First Amendment depends, however, on whether the speech involved is considered "private," "public," or "commercial."⁴² As the nation which virtually introduced the Internet, in 1996, the United States appeared to be "at the forefront in reckoning with legal and policy issues at stake in Internet regulation."⁴³ On February 8, 1996, President Clinton signed into law the Telecommunications Act of 1996 (Telecom Act),⁴⁴ amending the Communications Act of 1934.⁴⁵ The Telecom Act includes the Communications Decency Act of 1996 (CDA)⁴⁶—an exclusively Internet-related section. The CDA declared that on-line service providers (ISPs) would be criminally liable for transmitting "indecent" material without restricting access to minors.⁴⁷ Failure to comply with the CDA promised fines of up to \$100,000 and a two-year prison sentence.⁴⁸

Immediately after President Clinton signed the CDA, the Act's constitutionality became a source of litigation. Opponents of the Act argued that it violated First Amendment Freedoms. Recently, the U.S. Supreme Court held that the CDA was unconstitutional.⁴⁹

41. U.S. CONST. amend. I.

42. "Private speech is given utmost protection, whereas the level of protection given to public or commercial speech will vary." Amy Knoll, *supra* note 37, at 279. For thorough discussions of the First Amendment and the Internet, see William Bennett Turner, *What Part of "No Law" Don't You Understand?*, WIRED, Mar. 1996, at 104; Robert F. Goldman, Note, *Put Another Log on the Fire, There's A Chill on the Internet: The Effect of Applying Current Anti-Obscenity Laws to Online Communications*, 29 GA. L. REV. 1075 (1995); Note, *The Message in the Medium: The First Amendment on the Information Superhighway*, 107 HARV. L. REV. 1062 (1994).

43. Knoll, *supra* note 37, at 279.

44. Telecommunications Act of 1996, 47 U.S.C. § 151 *et seq.*; Evan Ramstad, *Telecom Law Rings In Changes*, NEW ORLEANS TIMES-PICAYUNE, Feb. 9, 1996, at C1.

45. Communications Act of 1934, 47 U.S.C. § 201 *et seq.*

46. Communications Decency Act of 1996, 47 U.S.C. § 223(a)-(h).

47. 47 U.S.C. § 223(a)-(h); *Likely Mergers Herald an Era Of Megacarriers*, WALL ST. J., Feb. 2, 1996, at B1.

48. *Likely Mergers Herald An Era of Megacarriers*, *supra* note 47, at B1.

49. The American Civil Liberties Union ("ACLU") led a group of plaintiffs in a suit filed in a U.S. District Court against U.S. Attorney General Janet Reno, claiming irreparable harm from infringement of their First Amendment Rights. *American Civil Liberties Union v. Reno*, 929 F. Supp. 824 (E.D. Pa 1996). The district court granted a temporary restraining order against the enforcement of section 223(a)(1)(B)(ii) of the statute "insofar as they extend to indecent but not obscene material." *Id.* at 826. The district court's decision was affirmed by the Third Circuit Court of Appeals. The Supreme Court granted *certiorari*, and heard

b. *Europe*.—The European Union (EU) has not officially taken a stance on the issue of speech on the Internet, although the EU's Council of Europe has made several recommendations regarding the use of the Internet.⁵⁰ Additionally, still pending is EU legislation⁵¹ which seeks to broaden the definition of "broadcasting"—a decision which could include the activities of various on-line services.⁵² Also, the EU Consultative Commission on Racism and Xenophobia urged Member States to "take all needed measures to prevent [the] Internet from becoming a vehicle for the incitement of racist hatred."⁵³ These remarks were likely made in response to controversies which arose in Germany and France in 1995.⁵⁴

c. *Germany*.—In December 1995, CompuServe, Inc., an American company providing on-line services, banned its customers from accessing nearly 200 discussion groups, fearing criminal prosecution under Germany's obscenity laws.⁵⁵ Although this was

arguments on the case on March 19, 1997. A decision was handed down June 20, 1997. The Court held that the Act was unconstitutional. *American Civil Liberties Union v. Reno*, No. 96-511, slip opinion 521 U.S. ___, argued March 19, 1997, decided June 26, 1997.

50. For instance, the Council made a recommendation in September 1995 that Member States should extend criminal searches to "computer systems within their jurisdiction which are connected by means of a network." Recommendation No. R(95) 13: Concerning Problems of a Criminal Procedure Law Connected With Information Technology, reprinted in 8 Effector Online No. 16, <<http://www.eff.org/pub/EFF/Newsletter>>.

51. Directive 95/024, amending Directive 89/552/EEC; Shailagh Murray and Richard L. Hudson, *Europe Seeks to Regulate Global Internet*, WALL ST. J., Mar. 18, 1996, at A7.

52. Murray and Hudson, *supra* note 51, at A7. This legislation, in addition to regulating the content of television programming, would restrict the amount of advertising in which providers of on-line, animated video images are permitted to engage. *Id.*

53. *EU Group Calls for Curb on Racism on Internet*, REUTER NEWS SERVICE-WESTERN EUROPE, Jan. 29, 1996, available in LEXIS, WORLD Library, TXTWE File (quoting statement made by EU Consultative Commission on Racism and Xenophobia). While not intending to interfere with free speech, the Commission members apparently were relying upon earlier EU directives which called for Member States "to shun television programmes which incited hatred on grounds of race, sex, religion or nationality." *Id.*

54. See *infra* notes 55-58 and accompanying text for discussion of these controversies.

55. Mitchell Martin, *Germany Forces CompuServe to Censor Sex on the Internet*, INT'L HERALD TRIB., Dec. 29, 1995. This is particularly significant because CompuServe users worldwide were subjected to the ban, not merely those who accessed CompuServe from Germany. Thus, over four million subscribers in

merely an exercise of self-censorship, CompuServe claims that it had been given information indicating that criminal liability would have resulted had the company not banned access to the sites.⁵⁶ In fact, CompuServe's Munich office was searched by police on November 22, 1995.⁵⁷ Although German officials maintain that CompuServe's decision to cut off access to the sites was not compelled, they claimed that CompuServe would be liable in the event that discussion groups with similar content are found in Germany in the future.⁵⁸ In February 1996, CompuServe re-opened nearly all of the discussion groups, simultaneously offering free parental control software, called CyberPatrol.⁵⁹

d. Singapore.—Although it is merely a small island nation with an approximate population of three million people, Singapore is on the cutting edge of the electronic frontier.⁶⁰ Singapore's Government embraces technology in both business and children's education.⁶¹

The Singaporean government does not, however, have a history of openly welcoming news and influences from outside its borders.⁶² In the summer of 1995, a government committee examined ways to curtail undesirable information on the Internet.⁶³ As a result, the Government announced comprehen-

147 countries were affected, regardless of the obscenity laws or "free-speech" protection which exist in subscribers' respective nations. *Id.*

56. *Censorship Issues On the Internet Continue to Confuse Governments*, NEW MEDIA AGE, Jan. 12, 1996, at 5 [hereinafter *Censorship Issues*].

57. *Id.*

58. Leslie Miller, *CompuServe Offers Parental Controls, Reopens Sites*, USA TODAY, Feb. 14, 1996, at 7D.

59. *Id.* This incident spawned several other U.S. on-line services, such as Prodigy and America On-line (AOL), to offer similar products to enable parental control over what types of web sites their children can access. See Mike Snider, *Coding System to Label Content Almost Done*, USA TODAY, Feb. 14, 1996, at 7D; *Filtering the Net*, USA TODAY, Feb. 14, 1996, at 7D (graphic explaining the operation of Internet coding system).

60. Tammy Tan, *S'pore Sends Out Biggest Number of Internet Messages, Has Most Chat Groups*, STRAITS TIMES (Singapore), May 30, 1995, at 40, available in LEXIS, NEWS Library, STRAIT File.

61. Fara Warner, *Asian Publishers Deem Internet Ally of the Press*, ASIAN WALL ST. J., Dec. 5, 1995, at 10.

62. Sunanda K. Datta-Ray, *How to Keep Singaporeans Out of Dark Alleys of the Internet?*, STRAITS TIMES (SINGAPORE), June 24, 1995, at 32, available in LEXIS, WORLD Library, STRAIT File.

63. *Singapore Curbs Internet Freedom*, NEW MEDIA AGE, July 6, 1995, at 2, available in LEXIS, NEWS Library, MAGS File.

sive Internet legislation in March 1996.⁶⁴ Additionally, in July of 1996, the Singaporean Government ordered its three ISPs to begin blocking sites on the World Wide Web (WWW).⁶⁵ This latest move was an attempt to target "content which may undermine (the) public morals, political stability and religious harmony of Singapore."⁶⁶

B. China's Tradition of Restricting Access to Information and Aversion to Western Cultural Influences

The Chinese Communist Party (CCP), the ruling party in China, has exercised control over public information in China since the 1950s, a few years after rising to power.⁶⁷ During this period, the CCP has utilized the "official" press as a propaganda tool to communicate the Party's goals and values.⁶⁸ CCP officials traditionally reviewed all material before it was printed.⁶⁹ Thus, as the mouthpiece of the Communist Party, the official press was filled with stories intended "to stir up enthusiasm for the leadership's policies and to indicate how to approach problems implementing those policies."⁷⁰ Essentially the concept of freedom of the press did not exist in China until the mid 1980s.⁷¹ Since that time, the proliferation of independent newspapers, journals, and magazines has made central control more difficult, and a moderately less controlled press has emerged as of 1996.⁷²

III. Analysis: The Emergence of the Internet in China

The use of the Internet in China, initially limited to a small group of professors and graduate students,⁷³ has begun to mushroom since 1994.⁷⁴ The rapid increase in the use of the Internet

64. McDermott, *Singapore Unveils Sweeping Measures to Control Words, Images on Internet*, WALL ST. J., Mar. 3, 1996, at B6.

65. Arnold, *supra* note 39, at 1.

66. *Id.* at 3.

67. OGDEN, *supra* note 6, at 150; *see also* Arnold, *supra* note 39, at 1.

68. OGDEN, *supra* note 6, at 150.

69. *Id.*

70. *Id.*

71. *Id.* at 151.

72. *Id.* at 151-52. This trend toward allowing more press freedom was temporarily reversed in the aftermath of the Tiananmen Square protests of 1989. OGDEN, *supra* note 6, at 152.

73. Craig S. Smith, *China to Build National Network Tied to Internet*, ASIAN WALL ST. J., Jan. 27, 1995, at 1.

74. Qiang Zhu, *Latest Development of the Internet in Mainland China*, 12 MICROCOMPUTERS FOR INFO. MGMT. 159, 159-60 (1995).

is mainly attributable to the Chinese government's endorsement and promotion of increased Internet access⁷⁵—especially for Chinese students, teachers, and businesses.⁷⁶ For example, the government has encouraged the development of national telecommunications and information infrastructures⁷⁷ in China, which will support widespread Internet access. The government contends that its endorsement and support of China's Internet is motivated by a desire to strengthen China's economy.

Although the Chinese government has certainly been influenced by the global development of the Internet⁷⁸ and is eager to help Chinese businesses realize the potential economic benefits of participating in global information-sharing on the Internet,⁷⁹ its motives are not merely economic.⁸⁰ Rather, the Chinese government also appears to be motivated by a desire to control,⁸¹ and thus profit⁸² from, the ensuing "information revolution" in China—an event that many commentators say would occur in China eventually, irrespective of the government's initial approval and support.⁸³

Although the Chinese government has been encouraging access to what is often an anarchic⁸⁴ bastion of free expression and free flowing information, concurrent efforts to restrict and regulate the flow of information demonstrate the government's desire to maintain control.⁸⁵ Several experts contend that any attempts to regulate the content that may be accessed on the Internet will be nothing short of illusory.⁸⁶ In China, however, where censorship

75. See *40 Thousand Chinese Users Enter Internet*, ASIAINFO DAILY NEWS SERVICE, Nov. 26, 1996, available in 1996 WL 10658301.

76. Smith, *supra* note 73, at 1.

77. Zhu, *supra* note 74, at 159-60.

78. Yan Ma, *Internet: The Global Access of Information*, 12 MICROCOMPUTERS FOR INFO. MGMT. 189, 190 (1995).

79. Kathy Chen, *China and Vietnam Resist A Common Foe: Internet*, ASIAN WALL ST. J., Sept. 5, 1996, at 1.

80. See Uli Schmetzer, *China's Internet Users Must File with Police*, NEW ORLEANS TIMES-PICAYUNE, Feb. 16, 1996, at A14. See *China Logs on to the Internet*, THE ECONOMIST, Jan. 7, 1995, at 27.

81. Schmetzer, *supra* note 80, at A14.

82. *Id.*

83. *China logs on to the Internet*, *supra* note, 80, at 27.

84. See ALLISON, *supra* note 8, at 35.

85. E.g., Marcus W. Brauchli, *China to Tighten Access To International Internet*, ASIAN WALL ST. J., Feb. 5, 1996, at 6; see *infra* notes 107-35 and accompanying text for a discussion of the Chinese government's attempts to regulate Internet usage.

86. Simon Fluendy, *Pandora's Box: Asian Regimes Struggle to Keep a Lid on the Net*, FAR E. ECON. REV., Sept. 26, 1996, at 71.

and restrictions on access to information are traditional,⁸⁷ governmental attempts to control Internet access may not prove to be entirely futile.⁸⁸ In fact, China's restrictions on the use of the Internet may undermine precisely what the Chinese government cites as its primary motive for endorsing the development of the Internet in China: stimulation of the Chinese economy.

A. Promotion of Internet Use by the Chinese Government

Since the establishment of China's first direct link to the Internet in 1993, China has seen tremendous efforts to develop Internet links, nationwide computer networks,⁸⁹ and telephone lines⁹⁰ to support increased Internet access. In January 1996, the Xinhua News Agency, China's official news agency, reported that telephone lines were installed in 33.84 million households during the period from 1991 to 1995; this is nine times the figure for 1986 to 1990.⁹¹ Xinhua further predicted that by the year 2001, China will boast thirty to forty telephones for every 100 households in urban areas, and 10.5 telephones for every 100 households nationwide.⁹²

Although China lags considerably behind many of the world's developed nations in the area of telecommunications infrastructure,⁹³ tremendous progress is being made. In fact, several international firms are investing in the development of infrastructure projects in China in anticipation of a booming market of consumers of electronic industry products and services.⁹⁴ Currently, six National Internet links and three nationwide networks

87. Joshua Gordon, *Cyber-Censorship Grows in East Asia Internet: Governments are Closing Off the One Medium that Allows Open Debate and Dissent*, L.A. TIMES, Sept. 27, 1996, at B9; *China Says Control of Internet Sites Is 'Normal'*, ASIAN WALL ST. J., Sept. 13, 1996, at 10. See also *supra* text accompanying notes 62-72.

88. Arnold, *supra* note 39, at 1.

89. Ma, *supra* note 78, at 190.

90. Zhu, *supra* note 74, at 162.

91. *News/Info Brief*, CINET-L, NEWSLETTER (China News Digest), 01-31-96, No. 60, <<http://www.cnd.org/CNDservices.html>>.

92. *Id.* These figures should not be confused with "teledensity" figures. "Teledensity" is a measurement of main telephone lines per 100 inhabitants. Neubarth, *supra* note 1, at 103. China was estimated to have a teledensity measurement of approximately 2%, as of November 1995 (compared to 51% for the United States). *Id.* at 109.

93. Neubarth, *supra* note 1, at 109.

94. See generally CINET-L NEWSLETTER (China News Digest), No. 58 -No. 74, <<http://www.cnd.org/CNDservices.html>>.

support institutional and campus networks which provide Internet access.⁹⁵

1. *Institute of High Energy Physics Network (IHEP)*.—Mainland China's first direct link to the Internet was established in 1993 at the Institute of High Energy Physics (IHEP), which is part of the Chinese Academy of Science.⁹⁶ This link was established to enable scientists at the National Science Foundation of China (NSFC) to participate in an international collaboration on high energy physics, and to provide the scientists at NSFC with electronic mail (e-mail) accounts.⁹⁷ This project was funded in part by a grant from China's State Planning Commission.⁹⁸

2. *ChinaNet*.—ChinaNet is based on the National Computing and Networking Facility of China (NCFC), which is supported by the World Bank. The NCFC backbone,⁹⁹ connecting three major educational institutions,¹⁰⁰ provides the "most powerful computing capability for scientists in China."¹⁰¹ China's Ministry of Posts and Telecommunications (MPT) owns and operates ChinaNet.¹⁰²

3. *China Education and Research Network (CERNET)*.—CERNET, funded by the Chinese government and directly managed by the State Education Commission, was begun in July 1995.¹⁰³ The backbone of this network is comprised of several Chinese universities which are connected to each other.¹⁰⁴

4. *China Internet*.—This network, which is still under construction, is also run by China's MPT as a commercial net-

95. Ma, *supra* note 78, at 190. A description of the nationwide networks which are connected to the Internet is provided below.

96. Zhu, *supra* note 74, at 160.

97. *Id.*

98. *Id.* Further funding was provided through a loan from the World Bank. *Id.*

99. A "backbone" is a major artery or nerve-center connection. See Michael Laris, *CHINA: Power for the Web*, FAR E. ECON. REV., Oct. 17, 1996, at 44.

100. NCFC connects the Chinese Academy of Sciences, Peking University, and Tsinghua University. Ma, *supra* note 78, at 192.

101. ChinaNet - China Internet Home Page <<http://www.cnc.ac.cn>>, reprinted in Ma, *supra* note 78, at 192.

102. See Fluendy, *supra* note 86, at 71.

103. Zhu, *supra* note 74, at 161.

104. *Id.*

work.¹⁰⁵ China Internet links more than 600 cities in China and will eventually cover the entire country.¹⁰⁶

B. Recent Regulation of Internet Use by the Chinese Government

On the heels of significant efforts to help China build a more advanced telecommunications and information infrastructure, the Chinese government began a campaign to tighten control over “the rising tide of information flowing into China,”¹⁰⁷ including regulations governing the use of the Internet.¹⁰⁸

On February 4, 1996, Xinhua, China’s official news agency, issued new rules which effectively centralized control over international computer networks in Chinese state agencies.¹⁰⁹ Under the new rules, all of China’s computer information networks must register with the government.¹¹⁰ These regulations followed an order, issued in January 1996 by China’s State Council (China’s cabinet), which restricted networks’ access to the international Internet by requiring that the networks exclusively use the international channels provided by China’s MPT.¹¹¹ Additionally, the State Council announced that it would possess ultimate control over the computer network industry.¹¹² The February regulations “ban organizations and individuals from activities violating state

105. *Id.* at 164.

106. *Id.*

107. Brauchli, *supra* note 85, at 6.

108. *Id.* In addition to Internet regulations, in January, 1996 China’s State Council announced an initiative which ordered all foreign economic news services—including Dow Jones & Co., majority owner of The Wall Street Journal—“to submit to regulation and censorship,” and be distributed by Xinhua news agency, China’s official news agency. Luchen Li & Jane Macartney, *Chinese Government Issues New Rules to Regulate Internet Access*, CND-GLOBAL, NEWSL. (China News Dig.), Feb. 7, 1996, GL96-017, News Brief ¶8, <<http://www.cnd.org/CNDservices.html>>.

109. Brauchli, *supra* note 85, at 6. The regulations provided that the networks, after liquidation, will be subject to management by the following four Chinese agencies: (1) the Ministry of Posts and Telecommunications; (2) the Ministry of Electronics Industry; (3) the State Education Commission; and, (4) the Chinese Academy of Sciences. Liedong Zheng, *China Issues New Rules to Regulate Links to the Internet*, CINET-L, Newsl. (China News Dig.), Feb. 16, 1996, No. 61, ¶ 1 <<http://www.cnd.org/CNDservices.html>>.

110. Brauchli, *supra* note 85, at 6. All computer networks which existed at the time the regulations were issued were required to liquidate and re-register with the government. *Id.*

111. Li & Macartney, *supra* note 108.

112. Brauchli, *supra* note 85, at 6.

security or secrets laws, and ban pornography and political content.”¹¹³

Shortly after issuing the new regulations, Chinese authorities temporarily suspended the issuance of new Internet memberships.¹¹⁴ This temporary suspension was in response to technical problems, according to Beijing officials.¹¹⁵ In light of the other contemporaneous regulations which were being imposed, many industry insiders believed that the suspension was an effort by Chinese officials to facilitate increased governmental control and oversight of the electronic industry.¹¹⁶ Shortly after the temporary suspensions of Internet memberships, and weeks after the regulations for international networks were issued, the Ministry of Public Security ordered all Internet and e-mail users to register with the police within thirty days after establishing a linkage with the Internet.¹¹⁷

This campaign to regulate information which crosses China's borders electronically was initiated for two reasons: (1) to allow the Chinese government to impose fees on users of the Internet, e-mail, and electronic services; and, (2) to respond to Communist party moralists' demands to safeguard the Chinese public against pornography and inappropriate material which is accessible on the Internet.¹¹⁸ Rather than take a hard line and attempt to entirely stifle the use of new technology, as was previously done with the fax and satellite dishes,¹¹⁹ the government has decided to join the fray and try to enjoy a “piece of the pie.”¹²⁰ These regulatory

113. Zheng, *supra* note 109.

114. Barclay Brown, *China Suspends New Internet Memberships*, CINET-L, NEWSL. (China News Dig.), Feb. 16, 1996, No. 61, ¶ (4), <<http://www.cnd.org/CNDservices.html>>.

115. *Id.*

116. *Id.*

117. Sun Ping, *Supervision of Internet Stepped Up*, CINET-L, NEWSL. (China News Dig.), Mar. 3, 1996, No. 62, ¶ 5, <<http://www.cnd.org/CNDservices.html>>. Failure to register is punishable by imprisonment or heavy fines, according to the dispatch by Xinhua news agency; dissemination of state secrets can carry the death penalty. Schmetzer, *supra* note 80, at A14.

118. Schmetzer, *supra* note 80, at A14.

119. Following the extensive use of fax machines by Chinese dissidents during the 1989 pro-democracy demonstrations in China, the government attempted to control the use of faxes by requiring that they be registered. In 1993, Chinese authorities introduced a ban on the purchase and ownership of satellite dishes and threatened to punish offenders with fines and confiscation. Both of these attempts to prohibit the use of modern electronic communication devices failed—mainly because of the extensive use of each of these devices. John Naughton, *China's Leaders Know That Power Flows from the Modem*, THE OBSERVER, Dec. 22, 1996.

120. *China logs on to the Internet*, *supra* note 83, at 27.

measures were seen by many as “a setback for market development in a nominally socialist but increasingly capitalistic China.”¹²¹ This was particularly the reaction overseas.¹²² Others, however, have viewed the government’s regulations as a positive sign—“a positive indication that the government has cautiously opened its arms to welcome the modern technology.”¹²³

China’s next move to exercise control over citizens’ use of China’s emerging Internet came in late August, 1996. At that time the government quietly blocked access to approximately 100 sites on the World Wide Web.¹²⁴ This was not an unexpected move, when considered in light of China’s campaign to control Internet access which began in early 1996.¹²⁵ What was unexpected, however, was the scope of the government’s action—the government banned “everything from major U.S. media sites to sexually explicit sites, to those offering information on Taiwan and Hong Kong.”¹²⁶ Government officials labeled the sites blocked as ones which were “suspected of carrying spiritual pollution.”¹²⁷

121. Li & Macartney, *supra* note 108.

122. Wu Fang & Daluo Jia, *Chinese On-line Service Providers Welcome New Internet Rules*, CINET-L, NEWSL. (China News Dig.), Mar. 3, 1996, No. 62, <<http://www.cnd.org/CNDservices.html>>.

123. *Id.* Speaking about the regulations issued in February, a sales manager for a Beijing Internet service provider said, “This is somewhere between a green light and a yellow light for the Internet.” *Id.*

124. Chen, *supra* note 79, at 1.

125. *Id.*

126. *Id.* Some examples of the types of sites which have been banned were reported by THE ASIAN WALL STREET JOURNAL as follows:

Verification checks by the industry sources [over the few days following reports of web site blocks] showed that China has shut access to sites in the following five categories for subscribers of China’s commercial network [ChinaNet]:

—English-language news sites sponsored by major U.S. media like the Wall Street Journal, the Washington Post and CNN.

—Chinese-language sites featuring news and commentaries from Taiwan, which Beijing considers a renegade province of China. These include sites sponsored by the Taiwanese government and media.

—Sites sponsored by Hong Kong newspapers and anti-Beijing China-watching publications like the Nineties and Open magazines.

—Overseas dissident sites, including those providing data on the restive Himalayan region of Tibet and Xinjiang’s independence movement.

—Mainstream sexually explicit sites, such as those sponsored by *Playboy* and *Penthouse* magazines. Some hard-core sites remain unblocked.

Id.

127. Arnold, *supra* note 39, at 1.

Such actions appear to be part of a Chinese campaign to preserve traditional Chinese social values, a movement stemming from a trend of rising nationalism in China.¹²⁸ News reports in December 1996 indicated that China plans to "strengthen its already strict controls over the Internet."¹²⁹ In January 1997, however, it was reported that China eased restrictions on access to the approximately 100 Web sites which were said to have been blocked in September 1996.¹³⁰ At the time of this writing, no further controls were reported.

The feasibility of blocking sites on the World Wide Web¹³¹ has been doubted by many experts.¹³² Nonetheless, China's authorities have required Chinese ISPs to "self-regulate"¹³³ the content which may be accessed by their customers.¹³⁴ For example, China's Ministry of Posts and Telecommunications, the owner of ChinaNet, is attempting to filter out unacceptable content by barring requests for certain Web sites from being passed on by its "routers," or "gateways."¹³⁵ In effect, comporting with the government's restrictions becomes an intelligent business decision for ISPs;¹³⁶ a provider which boasts compliance with the Govern-

128. Marcus W. Brauchli & Kathy Chen, *New Nationalism: China's Hubris Blossoms In Step With Its Economy*, ASIAN WALL ST. J., June 26, 1995, at 1.

129. *China Plans Further Internet Controls*, DOW JONES INT'L NEWS SERVICE, Dec. 26, 1996, available in 12/26/96 DJINS 06:05:00. *But see* Naughton, *supra* note 123 (reporting that China recently lifted its ban on certain Western Internet sites).

130. Kathy Chen, *China Lifts Some Curbs on Internet Access*, THE ASIAN WALL ST. J., Jan. 16, 1997, at 1. According to an official of the State Council, China's cabinet, certain Western news cites which were initially banned were reopened after checks. *Id.* The State Council official also stated that "officials would maintain their watch on politically suspect or pornographic material, but were trying to take a selective approach to blocking offending [Web] sites." *Id.*

131. Internet sites on the World Wide Web will hereinafter be referred to as "Web sites."

132. Fluendy, *supra* note 84, at 71. For a thorough discussion of the feasibility of Internet regulation, *see infra* text accompanying notes 137-54.

133. This is similar to the form of self-regulation exercised by CompuServe, discussed *supra* at notes 55-59 and accompanying text. The situation in China is distinguishable from that in Germany in that the Chinese government is explicitly requiring the ISPs to regulate—making the ISPs responsible for blocking access to unacceptable content through their systems. In Germany, the liability of the ISPs was not quite as certain; the pre-Internet obscenity laws were the impetus for CompuServe's fear of prosecution.

134. Arnold, *supra* note 39, at 1.

135. Fluendy, *supra* note 86, at 71. "[R]outers, or gateways [a]re the computers or programs that steer data requests from a user to a host computer where the data is stored." *Id.*

136. *Open for Business: How China Will Use the Internet to Promote Trade*, EDUCOM REV., Nov.-Dec. 1995, at 40-44.

ment's restrictions is more appealing to potential customers. Additionally, such a system makes it easier for the authorities to monitor the content which citizens may access on the Internet in China.

C. *The Feasibility of China's Internet Regulation*

Several commentators contend that it is virtually impossible to control or regulate the up-loading, down-loading, or viewing of material on the Internet.¹³⁷ As a non-centralized, globally-reaching medium, the Internet may be navigated without regard to national borders.¹³⁸ Both the Chinese government and Chinese ISPs, however, are currently attempting to restrict access to certain information which is available on the Internet.¹³⁹ Skeptics, including most electronic industry experts, claim that regulations attempting to block access to hand-picked Web sites are neither technically feasible, nor enforceable.¹⁴⁰ The technical impossibility of restricting access to portions of the Internet, however, does not necessarily lead one to the conclusion that regulations do not effectively prevent citizens from accessing undesirable materials on the Internet.¹⁴¹

China's current tactic for controlling how its citizens use the Internet is to put pressure on its ISPs,¹⁴² "the vital bridge between the diffuse computer network and local users."¹⁴³ The ISPs are denying any requests to access sites that are blacklisted by blocking the IP address¹⁴⁴ of such sites. In order to do so, however, the ISPs must program large number of routers to block the IP addresses.¹⁴⁵ Experts warn that such extensive router-level censorship is likely to create bottlenecks, dramatically slowing the transmission of data over the networks.¹⁴⁶ The basic problem

137. See Naughton, *supra* note 119.

138. See *id.*

139. See *supra* text accompanying notes 107-36.

140. See Bill Washburn, *Chasing the Wind*, INTERNET WORLD, July 1996, at 30.

141. See Arnold, *supra* note 39, at 1.

142. See *supra* text accompanying notes 133-36.

143. Fluendy, *supra* note 86, at 71.

144. An IP address is "the numerical equivalent of the [Internet] address," such as <http://www.dsl.edu> (The Dickinson School of Law's Web site). Fluendy, *supra* note 86, at 71.

145. Fluendy, *supra* note 86, at 71.

146. *Id.*

with this method is simple: "Routers aren't designed to filter content."¹⁴⁷

In addition to the difficulty and risk of placing blocks on particular Web site IP addresses, the Chinese government must contend with the fact that users who wish to access blacklisted Web sites may employ several methods to circumvent such blocks. For example, short "spoofing" programs may be written and passed on via e-mail which prevent router-level blocking.¹⁴⁸ Also, for the price of an international telephone call, any computer user can access the (uncensored) Internet through foreign ISPs without being detected.¹⁴⁹

Nicholas Negroponte, head of the Massachusetts Institute of Technology's Media Lab, has said, "[t]he use of centralist means to censor the Net is doomed to failure, unless you simply frighten people into silence."¹⁵⁰ While the technological evidence suggests that nearly any effort to control or censor any part of the Internet is illusory, this is not likely to prove entirely true in China. Where the Chinese government's attempts to censor the Internet fall short technically, they "make up with intimidation."¹⁵¹

Chinese authorities have shown a considerable naivete with regard to the Internet—the restrictions which they have imposed on the use of the Internet are seemingly hollow. China's Internet regulation, however, will probably not fall on deaf ears. The recent restrictions on the use of the Internet are not likely to incite the type of backlash that has been seen in the United States in

147. *Id.* (quoting Michael Conley, managing director of the computer firm Spyglass Asia Pacific). The technical problems arise as a result of this misuse of routers, which must contend with the fact that "there are 70,000 or more different routes around the major nodes of the Internet, and when one is blocked, messages are automatically channeled onto a different route." *Id.*

148. Fluendy, *supra* note 86, at 71. "[Joel] Berman [director of Digital Equipment Corp.'s Unix Group in the Asia Pacific] believes that spoofing programs will quickly be written and passed from Net user to Net user via e-mail, the one service Asian governments haven't tried to censor." *Id.*

149. Naughton, *supra* note 119.

Anyone with a computer, a modem and an Internet account can publish and be damned or simply cruise cyberspace picking up information from all over the world, whether from established sources such as the [New York] Times or Wall Street Journal, or from the innumerable web sites run by Chinese dissidents abroad.

Id. See also Arnold, *supra* note 39, at 1.

150. Fluendy, *supra* note 86, at 71.

151. Arnold, *supra* note 39, at 1.

response to the enactment of the Communications Decency Act.¹⁵² Rather, the Chinese citizenry is likely to comply with the orders of its government, as they apparently feel fortunate to be able to participate in global information sharing on the Internet, despite any limitations.¹⁵³ Given the Chinese Communist Party's long-standing policies which have led to the jamming of radio signals, banishment of books, and censorship of newspapers, it is likely that China's ISPs will comply with the Government's orders in order to avoid losing governmental endorsement and support for the development of China's Internet.¹⁵⁴

D. The Likely Implications of China's Regulation Efforts

Although China's authoritarian Internet policies are consistent with its past actions, such Big Brother tactics—if they continue—are likely to adversely affect China's attempt to ride the “wave of the future.” This is especially true with regard to the Internet's potential for economic development. The current state of the Internet in China, however, will not substantially limit its use for educational and human rights activities.

The Internet has posed a complex dilemma for China's rulers: “On the one hand, they're keen to see their citizens benefit from the wealth of knowledge stored on the computers that make up the Net. But they aren't comfortable with everything the Net puts at a computer user's fingertips.”¹⁵⁵ As yet, there has been no real sign of a domestic political stir over the Chinese government's censorship of the Internet. It is only a matter of time, however, before such a stir emerges. Because China is in such an embryonic stage of Internet connectivity, and only a very small percentage of the population has access to the Internet,¹⁵⁶ it is not surprising that China's Internet censorship has not yet become a domestic political issue. With the tremendous growth of the Internet in

152. See *supra* text accompanying notes 41-49, discussing the state of Internet regulation in the United States.

153. See Fluendy, *supra* note 86, at 71.

154. “Tim Krauskopf, vice-president for research and development at Spyglass Asia Pacific [an Internet software firm] thinks that for now, companies like his have no choice but to play along with the authorities. ‘It is either a censored Internet in Asia or no Internet at all,’ he says.” Fluendy, *supra* note 86, at 71. See also *Open for Business* (interview with James Chu), *supra* note 136.

155. Fluendy, *supra* note 86, at 71.

156. A survey in mid 1996 indicated that fewer than 2% of Chinese families owned a computer. Arnold, *supra* note 39, at 1.

China,¹⁵⁷ especially among students, activist voices are likely to be heard in the near future. Although China has banned several Web sites run by Chinese dissidents and human rights organizations, their messages are likely to penetrate China's "firewall."¹⁵⁸ China's computer-savvy and politically-minded students are likely to have the knowledge and motivation to gain access to uncensored news and voice their concerns.

Stemming from China's economic reform policy of the 1980s,¹⁵⁹ China's endorsement of and support for the Internet was primarily motivated by a desire to promote it as a business and educational tool.¹⁶⁰ Thus far the Internet has proven extremely useful in education¹⁶¹ and, to a lesser extent, in business.

While the use of the Internet is increasing rapidly in China, there are several indications that governmental censorship and control over content will slow the development of Internet access, thus hampering the very economic development that China hopes to promote. First of all, the costs which China's ISPs incur by complying the blockage of blacklisted Web sites will be passed on to the users. This is a move in the wrong direction, as the cost of accessing the Internet is already prohibitively high for many.¹⁶²

Secondly, the censorship of the Internet may be frowned upon by many nations, creating political tension. Such tension could hinder foreign investment by companies which face political pressure at home not to do business which assists a nation to restrict free speech and expression. For example, it is foreseeable that China would hire U.S. companies to design software which would be used to filter out "spiritual pollution." This would place such companies in the "unenviable position of choosing between abandoning the Chinese market or becoming a partner in the suppression of [political] dissent."¹⁶³ Certainly such a dilemma

157. See Naughton, *supra* note 119.

158. Joseph Kahn et al., *Chinese Firewall: Beijing Seeks to Build Customized Internet With a Muzzle on It*, WALL ST. J. EUR., Feb. 1, 1996, at 1.

159. "This policy stressed 'opening to the world' through trade and cooperation. It further included academic exchange activities and the fostering of programs in science, technology, and education." D. LaMont Johnson, *China and the Internet: Global Questions About a Global Information Infrastructure*, 12 COMPUTERS IN THE SCHOOLS 1, 3 (1996).

160. Laris, *supra* note 99, at 44.

161. Kahn et al., *supra* note 158, at 1.

162. Connie Ling, *Users May Pay the Bill for Censoring the Internet*, ASIAN WALL ST. J., July 15, 1996, at 3.

163. Michael Clough, *CHINA'S NET 4 MAY SNARE U.S. BUSINESS*, THE PLAIN DEALER, Sept. 19, 1996, at 11B.

would frighten off potential competitors from providing services necessary for the development of China's Internet. Thus, China's current restrictions on the Internet are likely to remain prohibitively high and hamper progress.

Finally, the mixed message which China is sending to the rest of the world—encouragement and support for the development and use of the Internet, yet censorship of blacklisted materials—has made some investors skittish.¹⁶⁴ Strict regulation of the content accessible on the Internet in China is not likely to discourage Chinese businesses from embracing it as a tool for competing in a global market. In fact, the Chinese are actually encouraged by the fact that the government is involved in the development of the Internet—they see the regulation as a sign that the government wants to promote Internet use.¹⁶⁵ Foreign investors, however, do not view such strict regulation as an open-armed invitation.¹⁶⁶ Such investors are more likely to cautiously shy away from China, fearing further restrictions on China's Internet, or even the possibility that the Chinese government will discontinue its support.

Without substantial foreign investment in the development of China's Internet, China lags considerably behind many of the world's major economic players in the ability to utilize the Internet for educational and business applications. While the Chinese government is encouraging investment in its information infrastructure, China will continue to lag behind as long as its strict control of content hampers such investment. In a global marketplace that is rapidly becoming one of "haves and have-nots" with respect to utilization of the Internet, China will not be able to compete until it is sufficiently "wired."

In the meantime, however, China is likely to experience social changes stemming from the exchange of ideas among students and other political activists, who are able to circumvent China's ban on such discourse.

IV. Conclusion

The Internet has begun to change the way people all around the world communicate, learn, and do business. China is no exception, especially in light of the tremendous growth of interest in, and capability for, accessing the Internet. The Chinese

164. Laris, *supra* note 99, at 44.

165. Fang & Jia, *supra* note 122.

166. Laris, *supra* note 99, at 44; Fang & Jia, *supra* note 122.

government is correct in its assertion that the use of the Internet by Chinese students, professors, and businesses will stimulate growth of China's increasingly capitalist economy. It would be naive, however, to think that the Chinese government can feasibly enforce its restrictions on how the Chinese people use the Internet.

Once China becomes "wired" for Internet access, China's people will be just as equipped to explore and settle the electronic frontier as people anywhere else in the world who have access to the Internet. The Chinese will be limited only by their government's rules, regulations, and censorship. Consequently, the Internet may be the catalyst for great social change in Chinese society—an enlightenment, of sorts. The Internet in China will not reach its potential for economic stimulation, however, under the current scheme of regulation. The Internet will provide channels of communication for political dialogue, however, irrespective of governmental attempts at regulation. By connecting to the Internet, and thus, the rest of the world, China is likely to experience changes ranging from expansion of human rights to the development of a global economic superpower.

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